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Remarks

In this RCE, three claims (13, 22, and 33) are amended. Claims 13-20 and 22-38 are presented for examination.

I. Claim Rejections: 35 USC § 102(e)

Claims 13, 19, 23-24, 28, and 30-38 are rejected under 35 USC § 102(e) as being anticipated by USPN 6,625,040 (Tuttle '040). Applicants respectfully traverse this rejection.

A proper rejection of a claim under 35 U.S.C. §102 requires that a single prior art reference disclose each element of the claim. See MPEP § 2131, also, *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 U.S.P.Q. 303, 313 (Fed. Cir. 1983). Since Tuttle '040 neither teaches nor suggests each element in the rejected claims, these claims are allowable over Tuttle '040.

Claim 13

Independent claim 13 recites numerous recitations that are not taught or suggested in Tuttle '040. For example, claim 13 recites that "the layer of electrically insulating material and the layer of permeable metal are **positioned within** the memory module" (emphasis added). FIG. 2 of Tuttle '040 shows integrated circuits 12 that include MRAM cells (2: 55-58). The integrated circuits 12 are positioned on top of a printed circuit board 20 and are "surrounded" by a magnetic shield 33 (3: 22-24). In other words, Tuttle '040 shows a magnetic shield placed over the MRAM cells. The magnet shield in Tuttle '040, however, is not "positioned within" the memory module.

Applicants respectfully remind the Examiner that for a prior art reference to anticipate under section 102, every element of the claimed invention must be identically shown in a single reference. In re Bond, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990).

For at least these reasons, independent claim 13 and its dependent claims are allowable over Tuttle '040.

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Claim 33

Independent claim 33 recites numerous recitations that are not taught or suggested in Tuttle '040. For example, claim 33 recites that the permeable material "is deposited onto the first side of the magnetic memory array" (emphasis added). FIG. 2 of Tuttle '040 shows integrated circuits 12 that include MRAM cells (2: 55-58). The integrated circuits 12 are positioned on top of a printed circuit board 20 and are "surrounded" by a magnetic shield 33 (3: 22-24). In other words, Tuttle '040 shows a magnetic shield placed over the MRAM cells. The magnet shield in Tuttle '040, however, is not "deposited onto" the memory array.

Applicants respectfully remind the Examiner that for a prior art reference to anticipate under section 102, every element of the claimed invention must be identically shown in a single reference. In re Bond, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990).

For at least these reasons, independent claim 33 and its dependent claims are allowable over Tuttle '040.

II. Claim Rejections: 35 USC § 102(b)

Claims 13, 19, 22-24, 28, and 30-38 are rejected under 35 USC § 102(b) as being anticipated by USPN 5,337,203 (Kitada). Applicants respectfully traverse this rejection.

Each of the independent claims recites numerous recitations that are not taught or suggested in Kitada. For example, claims 13 and 22 recite shielding a magnetic random access memory module from stray magnetic fields by performing recited elements. Claim 33 recites shielding a magnetic memory array from stray magnetic fields by performing recited elements. Kitada is directed to "a magnetoresistive head suitable for reading for high density magnetic recording" (1: 15-16). Kitada is not directed to shielding memory modules or memory arrays.

For at least these reasons, the claims are allowable over Kitada.

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III. Claim Rejections: 35 USC § 102(e)

Claims 13, 19, 23-24, and 30-38 are rejected under 35 USC § 102(e) as being anticipated by USPN 2002/0105058 (Tuttle '058). Applicants respectfully traverse this rejection.

Claim 13

Independent claim 13 recites numerous recitations that are not taught or suggested in Tuttle '058. For example, claim 13 recites that "the layer of electrically insulating material and the layer of permeable metal are **positioned within** the memory module" (emphasis added). FIG. 3 of Tuttle '058 shows two separate modules: a semiconductor chip 300 and a carrier 200. These two modules connect together to form an IC package assembly (see FIG. 6 at #102). Tuttle '058 clearly states that the magnetic shielding layer 113 of FIG. 6 is formed in the carrier 200, not the semiconductor chip 300: The "magnetic shielding layer 113 is formed of a magnetic shielding material as part of the flip-chip carrier 200" ([0031]). By contrast, claim 13 recites that both the insulating material and permeable metal are "positioned within the memory module."

Applicants respectfully remind the Examiner that for a prior art reference to anticipate under section 102, every element of the claimed invention must be identically shown in a single reference. In re Bond, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990).

For at least these reasons, independent claim 13 and its dependent claims are allowable over Tuttle '058.

Claim 33

Independent claim 33 recites numerous recitations that are not taught or suggested in Tuttle '058. For example, claim 33 recites that the permeable material "is deposited **onto** the first side of the magnetic memory array" (emphasis added). FIG. 3 of Tuttle '058 shows two separate modules: a semiconductor chip 300 and a carrier 200. These two modules connect together to form an IC package assembly (see FIG. 6 at #102). Tuttle '058 clearly states that the magnetic shielding layer 113 of FIG. 6 is formed in the carrier 200, not the semiconductor chip 300: The "magnetic shielding layer 113 is formed of a

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magnetic shielding material as part of the flip-chip carrier 200" ([0031])). By contrast, claim 33 recites that the permeable material is "deposited onto the first side of the magnetic memory array."

Applicants respectfully remind the Examiner that for a prior art reference to anticipate under section 102, every element of the claimed invention must be identically shown in a single reference. In re Bond, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990).

For at least these reasons, independent claim 33 and its dependent claims are allowable over Tuttle '058.

IV. Claim Rejections: 35 USC § 103(a)

Claim 22 is rejected under 35 USC § 103(a) as being unpatentable over Tuttle '040 in view of USPN 4,641,213 (Shimada). Applicants respectfully traverse.

Independent claim 22 recites that the layer of electrically insulating material is deposited "on a surface" of a magnetic memory array, and that the permeable metal layer is sputtered "on the layer" of electrically insulating material. Tuttle '040 does not teach or suggest these recitations.

Tuttle '040 states that the integrated circuits 12 include *internal* electromagnetic structures, such as MRAM cells and access circuitry. (Col. 2, lines 55-58, emphasis added). Thus, for a layer of insulating material to be deposited on a surface of a magnetic memory array (*within* integrated circuit 12) and for the layer of permeable metal layer to be sputtered on a surface of the electrically insulating layer, as set forth in amended independent claim 22, the magnetic shielding layers of Tuttle '040 would necessarily be positioned *within* the integrated circuits 12. However, Tuttle '040 teaches the variously illustrated magnetic shielding layers 22, 33, 44, 44 used to protect the magnetically sensitive integrated circuits 12 are either *on or within the printed circuit board 20*, or otherwise *spaced away from the magnetically sensitive integrated circuits 12*. There is no teaching or suggestion in Tuttle '040 that the magnetic shielding layers 22, 33, 44 and 55 could be positioned within the

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magnetically sensitive integrated circuit 12, much less be deposited on a surface of a magnetic memory array within the integrated circuit 12.

Shimada fails to remedy the deficiencies of Tuttle '040. In fact, Shimada relates to completely different art. Shimada teaches magnetic recording heads and fails to make any teaching or suggestion regarding magnetic memory arrays or the positioning of insulating layers and permeable metal layers relative to a magnetic memory array.

For at least these reasons, independent claim 22 is allowable over Tuttle '040 and Shimada.

V. Claim Rejections: 35 USC § 103(a)

Claims 14-18, 20, 25-27, and 29 are rejected under 35 U.S.C. §103(a) as being unpatentable over Tuttle '040 in view of Shimada and USPN 2002/0160541 (Durcan). Applicants respectfully traverse.

Each of claims 14-18, 20, 25-27 and 29 depend, either directly or indirectly, from one of independent claims 13 and 22, which are in allowable condition for at least the reasons discussed above. Durcan fails to overcome the above-noted deficiencies of Tuttle '040 and Shimada, alone or in combination.

VI. Claim Rejections: 35 USC § 103(a)

Claims 14-18, 20, 25-27, and 29 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kitada in view of Shimada and Durcan. Applicants respectfully traverse.

Each of claims 14-18, 20, 25-27 and 29 depend, either directly or indirectly, from one of independent claims 13 and 22, which are in allowable condition for at least the reasons discussed above. Durcan fails to overcome the above-noted deficiencies of Kitada and Shimada, alone or in combination.

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VII. Claim Rejections: 35 USC § 103(a)

Claims 14-18, 20, 25-27, and 29 are rejected under 35 U.S.C. §103(a) as being unpatentable over Tuttle '058 in view of Shimada and Durcan. Applicants respectfully traverse.

Each of claims 14-18, 20, 25-27 and 29 depend, either directly or indirectly, from one of independent claims 13 and 22, which are in allowable condition for at least the reasons discussed above. Durcan fails to overcome the above-noted deficiencies of Tuttle '058 and Shimada, alone or in combination.

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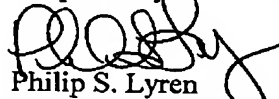
CONCLUSION

In view of the above, Applicants believe all pending claims are in condition for allowance. Allowance of these claims is respectfully requested.

Any inquiry regarding this Amendment and Response should be directed to Philip S. Lyren at Telephone No. (832) 236-5529. In addition, all correspondence should continue to be directed to the following address:

Hewlett-Packard Company
Intellectual Property Administration
P.O. Box 272400
Fort Collins, Colorado 80527-2400

Respectfully submitted,


Philip S. Lyren
Reg. No. 40,709
Ph: 832-236-5529

CERTIFICATE UNDER 37 C.F.R. 1.8

The undersigned hereby certifies that this paper or papers, as described herein, is being transmitted to the United States Patent and Trademark Office facsimile number 571-273-8300 on this 11th day of June, 2006.

By 
Name: Carrie McKerley